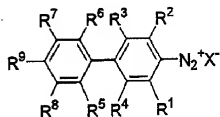


# WHAT IS CLAIMED IS:

1. A heat-sensitive recording material comprising a support and at least one heat-sensitive recording layer, wherein

the heat-sensitive recording layer comprises at least one diazo compound and at least one coupler, and the at least one diazo compound is encapsulated in microcapsules and is represented by the following general formula (1):

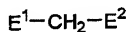
General formula (1)



wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  and  $R^8$  each independently represents a hydrogen atom, a halogen, an alkyl group, an alkoxy group, an alkylthio group or an arylthio group;  $R^9$  represents a hydrogen atom, an alkyl group or an alkoxy group; and  $X^-$  represents an anion.

2. The heat-sensitive recording material according to claim 1, wherein the coupler is represented by the following general formula (3):

General formula (3)



wherein  $E^1$  and  $E^2$  each independently represents an electron attractive group and  $E^1$  and  $E^2$  may be bonded to each other to form a ring.

3. The heat-sensitive recording material according to claim 1, wherein capsule walls of the microcapsules comprise at least one of polyurethane and polyurea.

4. The heat-sensitive recording material according to claim 1, wherein the halogen is a chlorine atom or a bromine atom.

5. The heat-sensitive recording material according to claim 1, wherein the alkyl group, the alkoxy group, the alkylthio group or the arylthio group has 1 to 30 carbon atoms.

6. The heat-sensitive recording material according to claim 1, wherein the  $X^-$  is selected from a group consisting of a hexafluorophosphoric ion, a borofluoride ion, a chloride ion, a sulfuric ion, a polyfluoroalkylcarboxylic acid ion, a polyfluoroalkylsulfonic acid ion, a tetraphenylboric acid ion, an aromatic carboxylic acid ion and an aromatic sulfonic acid ion.

7. The heat-sensitive recording material according to claim 1, wherein the diazo compound represented by general formula (1) is contained in a form of a complex compound.

8. The heat-sensitive recording material according to claim 1, wherein the coupler contained in the heat-sensitive recording layer is contained outside the microcapsules.

9. The heat-sensitive recording material according to claim 1, wherein a high polymer forming the capsule walls of the microcapsules has a glass transition temperature in a range from 60 to 200°C.

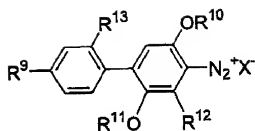
10. The heat-sensitive recording material according to claim 1, wherein the diazo compound represented by general formula (1) is contained in the heat-sensitive recording layer in an amount ranging from 0.02 to 5 g/m<sup>2</sup>.

11. The heat-sensitive recording material according to claim 1, wherein the heat-sensitive recording layer is a laminated type recording layer comprising a plurality of layers.

12. A heat-sensitive recording material comprising a support and at least one heat-sensitive recording layer, wherein

the heat-sensitive recording layer comprises at least one diazo compound and at least one coupler, and the at least one diazo compound is encapsulated in microcapsules and is represented by the following general formula (2):

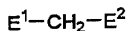
General formula (2)



wherein  $R^9$  represents a hydrogen atom, an alkyl group or an alkoxy group;  $R^{10}$  and  $R^{11}$  each independently represents an alkyl group;  $R^{12}$  and  $R^{13}$  each independently represents a hydrogen atom, a halogen, an alkyl group or an alkoxy group; and  $X^-$  represents an anion.

13. The heat-sensitive recording material according to claim 12, wherein the coupler is represented by the following general formula (3):

General formula (3)



wherein  $E^1$  and  $E^2$  each independently represents an electron attractive group and  $E^1$  and  $E^2$  may be bonded to each other to form a ring.

14. The heat-sensitive recording material according to claim 12, wherein capsule walls of the microcapsules comprise at least one of polyurethane and polyurea.

15. The heat-sensitive recording material according to claim 12, wherein the alkyl group or the alkoxy group has 1 to 12 carbon atoms.

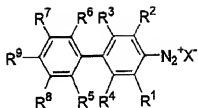
16. The heat-sensitive recording material according to claim 12, wherein the alkyl group or the alkoxy group has a substituent.

17. The heat-sensitive recording material according to claim 12, wherein an average particle diameter of the microcapsules is 0.3 to 12  $\mu$  m.

18. The heat-sensitive recording material according to claim 12, wherein the heat-sensitive recording layer further comprises at least one selected from a group consisting of an organic base, a free radical generating agent, an acid stabilizer, an antioxidant, a color-formation aid, a wax, an antistatic agent, a defoaming agent, a fluorescent dye, a surfactant and an ultraviolet ray absorbent.

19. A heat-sensitive recording method comprising the steps of:  
preparing a heat-sensitive recording material comprising a support and at least one heat-sensitive recording layer, the heat-sensitive recording layer comprising at least one diazo compound and at least one coupler, the at least one diazo compound being encapsulated in microcapsules and being represented by the following general formula (1):

General formula (1)



wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  and  $R^8$  each independently represent a hydrogen atom, a halogen, an alkyl group, an alkoxy group, an alkylthio group or an arylthio group;  $R^9$  represents a hydrogen atom, an alkyl group or an alkoxy group; and  $X^-$  represents an anion;

heating a recording surface of the heat-sensitive recording material imagewise to cause a reaction between the diazo compound and the coupler to form a color; and

irradiating light to decompose the remaining diazo compound which has not formed a color.

20. The heat-sensitive recording method according to claim 19, wherein the light has a wavelength longer than 400 nm.